

LABORATORY SYSTEM IMPROVEMENT PROGRAM (L-SIP)
WISCONSIN STATE LABORATORY OF HYGIENE ASSESSMENT REPORT

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Pyle Center
University of Wisconsin-Madison

Prepared by
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Executive Summary

In September 23, 2010, the Wisconsin State Laboratory of Hygiene (WSLH) was awarded a Laboratory System Improvement Program Assessment (L-SIP) Mini Grant to support a Laboratory System Improvement Program exercise. The intent of the exercise was to determine the strengths and weaknesses of the Wisconsin public health laboratory system. The program followed the model outlined by the L-SIP tools developed by the American Public Health Laboratory Association and the Centers for Disease Control and Prevention. Invitations to attend the L-SIP were sent to participants who represented a broad range of public health interests. On February 16, 2011, 55 persons attended the Laboratory System Improvement Program (L-SIP) for the Wisconsin State Laboratory of Hygiene (WSLH). The program was held at the Pyle Center, University of Wisconsin-Madison. Each of the ten essential services was assessed and scores for each service were noted. The L-SIP assessment program findings are the first step in identifying the strengths and weaknesses of the public health laboratory system in Wisconsin. The findings from the program will serve as a starting point for the identification and implementation of process improvement opportunities.

Background

The intended use of the L-SIP tool is the measuring of the relative strength of the public health laboratory system. The American Public Health Laboratory

Association defines a state public health laboratory system as “An alliance of laboratories and other partners within a state that supports the ten essential public health services under the aegis of the state public health laboratory. The system members and stakeholders operate in an interconnected and interdependent way to facilitate the exchange of information, optimize laboratory services, and help control and prevent disease and public health threats.” The L-SIP assessment process is not intended to compare responses obtained from other L-SIP assessments. The L-SIP assessment program held by WSLH was intended to assess the entire public health laboratory system, not the Wisconsin State Laboratory of Hygiene.

The mission of the Wisconsin State Laboratory of Hygiene includes teaching, research, and testing services to the public and environmental communities and to citizens of Wisconsin. WSLH is part of a larger state public health laboratory system that addresses the needs of the citizens of the state. The system is comprised of state and local public health laboratories, Department of Health, Department of Natural Resources, clinical and environmental laboratory providers, researchers, and users of the public health laboratory services. The public health laboratory system is based on ten essential public health laboratory services and eleven core functions and capabilities of state public health laboratories.

The ten essential services of a public health laboratory system include:

Essential Public Health Services

- 1. Monitor health status to identify community health problems*
- 2. Diagnose and investigate health problems and health hazards in the community*
- 3. Inform, educate, and empower people about health issues*
- 4. Mobilize community partnerships to identify and solve health problems*
- 5. Develop policies and plans that support individual and community health efforts*
- 6. Enforce laws and regulations that protect health and ensure safety*
- 7. Link people to needed personal health services and assure the provision of health care when otherwise unavailable*
- 8. Assure a competent public health and personal health care workforce*
- 9. Evaluate effectiveness, accessibility, and quality of personal and population-based health services*
- 10. Research for new insights and innovative solutions to health problems*

The eleven core functions and capabilities of state public health laboratories include:

1. *Disease prevention, control and surveillance*
2. *Integrated data management*
3. *Reference and specialized testing*
4. *Environmental health and protection*
5. *Food safety*
6. *Laboratory improvement and regulation*
7. *Policy development*
8. *Emergency response*
9. *Public health-related research*
10. *Training and education*
11. *Partnerships and communications*

Assessment Process

The WSLH L-SIP program was developed using the L-SIP User's Guide, November 2009, as a model. This guide provided detailed steps to follow in creating the program. Numerous action steps were taken to initiate the process. These steps included:

- Developing a draft program
- Secure a date to conduct the program
- Securing site for conducting the program
- Identifying potential participants to represent all aspects of the public health laboratory system
- Send out invitations to participants
- Identify facilitators, theme takers, and note counters
- Training of facilitators, theme takers, and vote counters
- Assignment of participants to work groups
- Construction of the meeting agenda
- Construction of conference day materials for participants

The WSLH L-SIP program was held on Wednesday, February 16, 2011 at the Pyle Center, University of Wisconsin-Madison campus. The participants were assigned to one of three groups. Each group had a facilitator, theme taker, and vote

counter. After each essential service was discussed, participants voted on what rating to give each service.

Each essential service was evaluated was evaluated using the following rating categories:

- 0 No activity
- 1 Minimal activity (1-25% met)
- 2 Moderate activity (26-50% met)
- 3 Significant activity (51-75% met)
- 4 Optimal activity (> 75% met)

Essential service #7 was evaluated by the entire group, and each of the three breakout groups addresses three other essential services.

Results

Each essential service was rated for the amount of activity that the state public health laboratory spent with each activity. The following are the summary scores for each of the ten essential services:

ASSESSMENT SCORES	0	1	2	3	4
	No Activity	Minimal Activity	Moderate Activity	Significant Activity	Optimal Activity
Essential Service #1: <i>Monitor Health status to identify Community health problems.</i>					X
Essential Service #2: <i>Diagnose and investigate health problems and health hazards</i>					X
Essential Service #3 <i>Inform, educate, and empower people about health issues.</i>					X
Essential Service #4 : <i>Mobilize community partnerships identify and solve health problems</i>				X	
Essential Service # 5 <i>Develop policies and plans that support individual and community health efforts</i>				X	

Essential Service #6: <i>Enforce laws and regulations that protect health and ensure safety</i>		X			
Essential Service #7: Link people to needed personnel health services And assure the provision of health care when otherwise unavailable				X	
Essential Service #8: Assure a competent public health and personal Health care workforce		X			
Essential Service # 9: Evaluate effectiveness, accessibility, and quality of personal and population-based health services			X		
Essential Service # 10: Research for new insights and innovate solutions to health problems		X			

Summary

Essential Service	Score	Comments
#1 Monitor health status to identify health problems	81.0	Essential service #1 rated the public health laboratory system as optimal because of a strong sentinel laboratory system exists in Wisconsin
1.1 Surveillance Information systems	100.0	System viewed as strong. Clinical is stronger than environmental. Improve participation of smaller laboratories
1.2 Monitoring of Community Health Status	62.0	Monitoring stronger with communicable diseases than chronic diseases and environmental issues Develop a system to support community environmental health
#2. Diagnose and Investigate Health Problems and Health Hazards in the community	100	Essential service #2 rated the public health laboratory system as optimal because of strong collaboration in developing contingency plans

2.1 Appropriate and State of the Art testing	100	Proper equipment and trained personnel available Develop contingency plans for decrease in preparedness funding
2.2 Collaboration and Networks	100	Improve the use of emergency notification system
2.3 Continuity of Operations Plan and Surge Capacity	100	Review the roles of laboratory partners
#3. Inform, Educate, and Empower People about health Issues	83.5	Essential service #3 rated as optimal because of excellent educational materials developed for state partners
3.1 Outreach and Communication with Partners	100	Evaluate how the state public health lab system can better inform public health officials
3.2 Public Information	83.5	Communications are usually clear and concise
3.3 Education	67.0	There is no system to measure the outcomes of training provided by laboratory staff.
#4. Mobilize Community Partnerships to identify and Solve Health problems	55.7	Essential service #4 rated as significant because of the strength of the clinical laboratory network
4.1 Constituency Development	67.0	Identify ways to build and strengthen environmental lab network
4.2 Communication	33.0	Communication works well down the system
4.3 Resources	67.0	Identify resources to be used to further develop laboratory networks
#5. Develop Policies and Plans that Support Individual and Community Health Efforts	55.5	Essential service #5 rated as significant because of the data collection is very strong allows for sound support at the local level
5.1 Role in Laboratory	50.0	Educate legislators

Related Policy Making		
5.2 Partnerships in Public Health Planning	83.5	Organize a state level forum for laboratories
5.3 Dissemination and Evaluation	33.3	Solicit feedback from customers and partners and focus on quality improvement
#6. Enforce Laws and Regulations that Protect Health and Ensure Safety	23.8	Essential service #6 rated as minimal because the public health laboratory system in Wisconsin is not involved in law enforcement and regulatory activities
6.1 Revision of Laws and Regulations	5.0	Enhance the understanding of the legislative process for development of regulations that impact laboratories
6.2 Encourage Compliance	66.5	Clinical and environmental laboratories are generally in compliance with all applicable laws and regulations
6.3 Enforcement of Laws and Regulations	0	Not done
#7. Link People to Needed Personal Health Services and Assure the Provision of Healthcare when otherwise unavailable	67.0	Essential service #7 rated as significant because good testing and good collaboration
7.1 Availability of Laboratory Services	67.0	Good testing, but access is limited.
#8. Assure a Competent Public Health and Personal Health Care Workforce	23.7	Essential service #8 rated as minimal because the public health laboratory system is not set up to train staff for public and personal health care needs. WSLH is involved in training laboratory professionals, but most participants in the system are not involved
8.1 Workforce Competencies	33.0	PT and education programs are in place. The public health lab system does not have the tools to evaluate qualifications of staff

		in all labs
8.2 Staff Development	33.0	There are training programs at WSLH but not in the overall lab system
8.3 Assuring Laboratory Workforce	5.0	Lack of qualified candidates due to low awareness of the profession and pay scales lower than those of other health care professionals
#9. Evaluate Effectiveness, Accessibility, and Quality of Personal and Population-based Services	38.8	Essential service #9 rated as moderate because of collaboration efforts with local public health laboratories
9.1 System Mission and Purpose	33.0	Strengthen the environmental component of laboratory services
9.2 System Effectiveness, Quality, and Consumer Satisfaction	33.0	Lab system puts out data, but how the data is used is not evaluated
9.3 SPH Laboratory System Collaboration	67.0	WSLH is an active collaborator with other agencies
#10. Research for Insights and Innovative Solutions to Health Problems	16.7	Essential service #10 rated as minimal because the public health laboratory system does not have a research mission. While WSLH has robust research activities, most participants in the system do not have research functions
10.1 Planning and Financing Research Activities	19.0	Explore partnerships with UW-Madison researchers
10.2 Implementation, Evaluation, and Dissemination	14.3	Explore the development of a public health laboratory research committee

ESSENTIAL SERVICE # 1: Monitor health status to identify community health problems	
INDICATOR 1.1: Surveillance Information Systems	
PRIORITY NEXT STEPS (rated immediate, high, medium or low)	KEY THEMES
<ul style="list-style-type: none"> • Improve participation of smaller labs in the clinical and environmental network • Engage the environmental labs in surveillance of community health problems • Improve partnerships with environmental labs • Evaluate the use of data surveillance in forensic toxicology for surveillance of community health problems 	<p>1.1.1</p> <p>A strong sentinel lab system. Laboratory reports for reportable diseases are submitted electronically</p> <p>Strong test reporting system provided needed data to public health at the local, state, and national levels. Strong link with hospital labs</p> <p>WSLH Occupational Health Division monitors accidents and deaths for the state public health lab system</p> <p>The laboratory lacks the ability to communicate directly with physicians</p> <p>Department of Natural Resources (DNR) has direct access to laboratory data form air and drinking water testing. DNR uses this data to issue air quality alerts and beach closings.</p> <p>The WSLH Forensic Toxicology program tests for ethanol, illegal drugs, and prescription drugs and submits data to law enforcement that identify trends in alcohol and drug usage.</p> <p>Results of Newborn Screening (NBS) data are used to assess the occurrence of conditions within the newborn population.</p> <p>Optimal</p> <p>1.1.2</p> <p>The clinical laboratory network is more advanced than the current environmental laboratory network.</p> <p>Work directly with physicians, clinical labs, etc. Test for both positive and negative samples to see what may be making people ill.</p> <p>The H1N1 testing at a single laboratory was not adequate. Additional testing was established at Medical College of Wisconsin and Marshfield Clinic.</p> <p>WSLH is a regional CDC funded lab for influenza and drug</p>

	<p>resistance. Help provide sample for labs to do validation. Pertussis testing. Can improve our informatics in partnerships No electronic method for getting data back to labs Optimal</p>
<p>INDICATOR 1.2: Monitoring of Community Health Status</p>	
<p>PRIORITY NEXT STEPS (rated immediate, high, medium or low)</p>	<p>KEY THEMES</p>
<ul style="list-style-type: none"> • Develop a comprehensive system to support community environmental health • Develop an environmental network similar to that for Infectious diseases • Determine the role of the state public health lab in monitoring chronic diseases such as diabetes, cholesterol. We address surveillance of acute infectious diseases 	<p>All environmental laboratories perform testing. Most of compliance testing is submitted directly to WSLH.</p> <p>Chemical terrorism preparation has been trialed. WSLH has received money to purchase equipment to do testing for chemical terrorism events Optimal</p> <p>1.2.2 Do all this stuff really well Excellent communication Optimal</p> <p>1.2.3 Communicate well with clinicians. Congenital disorders detected by NBS are reported in an efficient and timely to DPH. Optimal</p> <p>1.2.4 Generate information about HPV and cervical cancer. TB etc. We do not do diabetes and heart disease. Cytogenetics performs studies for congenital diseases.</p> <p>Know little what DHS and Medical College of Wisconsin do with the data. Minimal</p> <p>1.2.5 Some data exchange and some discussion of sharing data. Reporting system for reportable diseases is as strong as anywhere in the country.</p>

	<p>Limited ability for customers to directly order tests.</p> <p>New LIMS system will be a great improvement.</p> <p>Operational funding is an issue. No money to build networks</p> <p>Minimal</p>
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ESSENTIAL SERVICE #2: Diagnose and investigate health problems in the community	
INDICATOR 2.1: Appropriate and state of the art testing	
PRIORITY NEXT STEPS (rated immediate, high, medium or low)	KEY THEMES
<ul style="list-style-type: none"> • Develop contingency plans for decrease in Preparedness Funding. • Collaborate/encourage mentoring/internships. • Develop training programs for lab staff • Develop an environmental laboratory testing network. 	<p>Sustainable? Need money for training, people, equipment. The Preparedness Grant has been very good to us – will it continue?</p> <p>Workforce development is imperative.</p> <p>Attracting new talent.</p> <p>Aging workforce.</p> <p>Clinical and environmental laboratory network for reference testing</p> <p>Low volume, odd testing is expensive but should be maintained at the WSLH – private labs cannot afford to do these tests. There is a public health obligation to provide these services.</p> <p>Ties to the University. Some WSLH staff have academic appointments at the UW-Madison.</p> <p>Sustaining technology is expensive – infrastructure of the labs needs to be maintained. This requires specialized personnel and equipment.</p> <p>State recruiting is difficult and takes a long time!</p> <p>Intern programs are important in developing our future workforce.</p> <p>Optimal</p>
INDICATOR 2.2: Collaboration and Networks	
PRIORITY NEXT STEPS (rated	KEY THEMES

immediate, high, medium or low)	
<ul style="list-style-type: none"> • Do a better job communicating to laboratory partners so they understand the LRN and their individual roles in public health emergency preparedness and response. • Improve the understanding of the use of emergency notification system 	<p>EPA has done “test” drills.</p> <p>Milwaukee laboratory has not been involved in Table Top Exercises.</p> <p>Financial drain on labs that will be providing testing as a backup for the WSLH who needs to do emergency testing.</p> <p>Chemical and Biological Laboratory Response Networks are set by the CDC, APHL, and the FBI. Private environmental stakeholders were not aware of this.</p> <p>Emergency response also includes hazmat, radiation protection.</p> <p>Teams go out and train and retrain.</p> <p>Use of HAN? Command caller? City Watch Etc.</p> <p>Optimal</p>
INDICATOR 2.3: Continuity of Operations Plan and Surge Capacity	
PRIORITY NEXT STEPS (rated immediate, high, medium or low)	KEY THEMES
<ul style="list-style-type: none"> • A “laboratory system” assessment needs to be made to see if plans and agreements that were made years ago are still relevant. • Review roles of lab partners. 	<p>Lack of awareness of laboratory plans for surge capacity and use of stockpiled resources.</p> <p>Plans are developed, implemented, and updated on a regular basis by WSLH.</p> <p>Optimal</p>

ESSENTIAL SERVICE #3: Inform, educate, and empower people about health issues	
INDICATOR 3.1: Outreach and Communication with Partners	
PRIORITY NEXT STEPS (rated immediate, high, medium or low)	KEY THEMES
<ul style="list-style-type: none"> • Evaluate how the state public health lab system staff can inform public 	<p>State lab system always provides excellent educational materials and is very easy to work with on regulatory issues (developing and enforcing)</p> <p>Communication systems are in place, for example HAN.</p>

<p>health officials</p> <ul style="list-style-type: none"> • Educate laboratorians so they can see the value of being part of a public health lab system • Assure adequate funding to continue outreach and communications efforts 	<p>Information seems to get out to those who need it very fast. Lab Technical Advisory Group holds regular meetings to discuss issues and share information. There is also a microbiology lab group that is statewide and frequently communicates via the Wisconsin Clinical Laboratory Network list serve.</p> <p>An activities report lists research projects and professional contributions of WSLH staff.</p> <p>WSLH responds to requests from the general public through the website or phone calls as well as to requests from other agencies and healthcare facilities.</p> <p>Optimal</p>
<p>INDICATOR 3.2: Public Information</p>	
<p>PRIORITY NEXT STEPS (rated immediate, high, medium or low)</p>	<p>KEY THEMES</p>
	<p>Communications from the state lab staff is clear and concise. The lab staff is always responsive to requests for information.</p> <p>Information is shared with the entire state laboratory system. Some information is targeted to specific agencies that are in turn shared with the public.</p> <p>The state laboratory system works closely with the department of health to provide information on laboratory testing services. WSLH puts customers in touch with technologists who perform tests and can advise customers on appropriate uses of tests. Some larger laboratories have account executives that also provide technical information.</p> <p>Information on environmental laboratory testing could be strengthened by the establishment of an environmental laboratory network.</p> <p>Funding for public health testing was initially identified for clinical testing and later for environmental testing. This may be a factor why the environmental laboratory network is not as robust as the clinical laboratory network.</p> <p>Laboratory staff need to explore better ways to provide</p>

	<p>information to local media.</p> <p>State and local agencies need a better understanding of how laboratories contribute to the success of their agency</p> <p>3.2.1 Optimal</p> <p>3.2.2 Significant Activity</p>
INDICATOR 3.3: Education	
PRIORITY NEXT STEPS (rated immediate, high, medium or low)	KEY THEMES
<ul style="list-style-type: none"> A system for measuring outcomes of training provided by laboratory staff is needed. 	<p>State lab system works closely with many community groups to get important health and environmental related information to the public.</p> <p>Tours of the lab are frequently offered to the public</p> <p>Local health departments provide a lot of educational literature to the public.</p> <p>Fe tools exist to evaluate the effectiveness of the educational literature provided</p> <p>The occurrence of vaccine-preventable diseases or food-borne illness is an opportunity to provide information to the public on prevention of these diseases.</p> <p>Public health laboratory information needs to be communicated to the public in languages that can be understood.</p> <p>Significant activity</p>

ESSENTIAL SERVICE #4: Mobilize community partnerships to identify and solve health problems	
INDICATOR 4.1: Constituency Development	
PRIORITY NEXT STEPS (rated immediate, high, medium or low)	KEY THEMES
<ul style="list-style-type: none"> Identify ways to strengthen (or build) the environmental lab network 	<p>The clinical laboratory network has been helpful to identify and solve health problems. A similar environmental laboratory network needs to be established.</p> <p>Coordinating response to H1N1 went very well because of</p>

<ul style="list-style-type: none"> • Identify resources to sustain the partnership activities 	<p>good collaboration between lab and agencies. Strong communication on a regular basis fosters the ability to respond well to crisis.</p> <p>Collaboration with local hospitals can help improve the public health laboratory system</p> <p>Resources to build and sustain laboratory networks need to be addressed.</p> <p>Support from national agencies such as EPA, FDA, USDA has been used to develop laboratory networks in many states.</p> <p>Need to have laboratory networks and partnerships that bring all laboratories into the system</p> <p>Significant activity</p>
<p>INDICATOR 4.2: Communication</p>	
<p>PRIORITY NEXT STEPS (rated immediate, high, medium or low)</p>	<p>KEY THEMES</p>
<ul style="list-style-type: none"> • Develop a system to determine the effective use of data. Communication works well down the system • System is stronger in some areas than others. Make the entire system strong 	<p>Procedures for communicating with and reporting to certain agencies are part of normal business.</p> <p>Communication plans exist but a more robust statewide laboratory communications system is needed.</p> <p>Communication plans exist and must be integrated into the networks, or they will only be effective for the specific agency that developed the plan.</p> <p>Communication plans need to target specific audiences so effective communication can occur during a crisis situation.</p> <p>Need to explore social media outlets for augmenting established communication plans.</p> <p>The state wide public health laboratory system has no effective means of communication among partners.</p> <p>Good systems exist but they could possibly be spread throughout the network more so they can be used more effectively.</p> <p>Systems such as health Alert Network (HAN) might be helpful</p>

	<p>to improve laboratory communications if all partners were active members of the HAN.</p> <p>The size and diversity of the lab system makes it a challenge to develop a “one size fits all” communication plan. Will be more effective to have a plan that has communication aspects tailored to the targeted groups of what is being communicated</p> <p>4.2.1 Moderate activity 4.2.2 Moderate activity</p>
INDICATOR 4.3: Resources	
PRIORITY NEXT STEPS (rated immediate, high, medium or low)	KEY THEMES
<ul style="list-style-type: none"> • Identify specific ways that public and private laboratories can support public and environmental health in Wisconsin • Identify resources that can be used to further develop laboratory networks 	<p>Public health system is challenged to find the resources needed to address priority public health issues.</p> <p>Resources need to be used effectively across all public health programs.</p> <p>WI public health systems uses it networks effectively.</p> <p>The public health laboratory system looks to each other when grants and funding are available to support laboratory efforts.</p> <p>More complete laboratory data can influence policy development and focus on laboratory issues.</p> <p>Agencies providing resources know that state public health agencies (state lab) use resources effectively.</p> <p>Resources are not just financial. Sharing staff is a critical resource that can be shared without the network.</p> <p>Public health infrastructure had been historically weak until it was brought to public attention (Anthrax in 2001) the essential services that public health system provides</p> <p>Significant activity</p>

ESSENTIAL SERVICE #5: Develop policies and plans that support individual and community health efforts	
INDICATOR 5.1: Role in Laboratory Related Policy Making	
PRIORITY NEXT STEPS (rated immediate, high, medium or low)	KEY THEMES
<ul style="list-style-type: none"> • Collate environmental data. • Educate policy makers to understand what value the laboratories bring and how the data can be used to drive policy development. • Educate legislators. Keep public health lab testing visible in state • Expand customer feedback process • Investigate the possibility of having internships, volunteers, LTE to work in labs • “Laboratory Explorers” program 	<p>5.1.1. WSLH talent and expertise is tapped into throughout the state and nationally. WSLH data collection is better than other SPHL.</p> <p>Infectious Disease laboratory at WSLH is doing a good job. Other areas at WSLH are not as effective.</p> <p>Data is not used to contribute policy development at all levels. Challenge to communicate what labs do and then educate others on the value of the data that is available for decision making.</p> <p>More focus on reactive response to data versus proactive response to data gathering and decision making.</p> <p>Moderate activity</p> <p>5.1.2. Infectious Disease Outbreaks have been well informed through data provided by the laboratories during the outbreak. Mercury and other trace metals data have influenced policy decisions.</p> <p>Lack of funding to support more global data collation.</p> <p>Holes in the data provide an impetus for those who influence policy development to ignore the issue and focus their energies on other issues.</p> <p>The laboratory provides excellent scientific data for use in policy development.</p> <p>A need exists for laboratorians to better analyze data and turn data into useful information.</p> <p>Significant activity</p>
INDICATOR 5.2: Partnerships in Public Health Planning	
PRIORITY NEXT STEPS (rated immediate, high, medium or low)	KEY THEMES
<ul style="list-style-type: none"> • Organize a state level forum 	<p>5.2.1 Laboratorians are often not involved in public health planning.</p>

<p>for laboratories</p>	<p>An annual Wisconsin laboratory forum that includes both public and private laboratories could contribute to improved planning. This forum would solicit information from all laboratory partners.</p> <p>Do an annual laboratory retreat</p> <p>An improved process for identifying the contributions made by laboratories to Healthy Wisconsin 2020.</p> <p>Significant activity</p> <p>5.2.2 Preparedness funding has enabled public health partners to develop emergency response capabilities.</p> <p>Leadership from the WSLH has encouraged partners to integrate emergency plans and to develop effective emergency response policies</p> <p>Optimal activity</p>
<p>INDICATOR 5.3: Dissemination and Evaluation</p>	
<p>PRIORITY NEXT STEPS (rated immediate, high, medium or low)</p>	<p>KEY THEMES</p>
<ul style="list-style-type: none"> • Identify way to continually solicit feedback from customers and partners and focus on quality improvement at the WSLH and throughout the system. • Identify success stories to share with others. 	<p>5.3.1 WSLH provides timely education through broadcast faxes and teleconferences.</p> <p>Laboratories need to enhance the knowledge of the role of the laboratory within their communities.</p> <p>Strategic planning is for the WSLH not for the Public Health System.</p> <p>Moderate activity</p> <p>5.3.2. The laboratory must be receptive to feedback from partners and customers.</p> <p>Effective dissemination and evaluation of laboratory services in a critical component of laboratory management.</p> <p>Moderate activity</p>

ESSENTIAL SERVICE #6: Enforce laws and regulations that protect health and ensure safety	
INDICATOR 6.1: Revision of Laws and Regulations	
PRIORITY NEXT STEPS (rated immediate, high, medium or low)	KEY THEMES
<ul style="list-style-type: none"> • Explore options for reviewing and recommending federal and State laws and regulations pertaining to laboratory practice. • Provide a list of laws and regulations that impact laboratory science. • Coordination of roles and responsibilities. WALDAB and WPHA do have a laboratory connection to the laboratory. Much larger area of focus that just laboratory. • Interact with Key Legislators – become proactive rather than reactive. • Enhance the understanding of the legislative process and process for development of regulations that impact laboratories. 	<p>Laboratorians need to understand state administrative rules and provide input whenever administrative rules impact the operation of laboratories.</p> <p>Local laboratory networks can effectively improve communications on laboratory regulations and other issues.</p> <p>Many regulations that impact public and environmental health, and food safety, have significant laboratory components.</p> <p>Legal Perspective: DNR, DHFS do have lawyers and attention is paid to using rules and biennial process to review and revise rules. Inside employees do not necessarily know what and when is happening (hearings etc.) and lack of tracking of legal activities. The WSLH does not have a legal liaison. Lack of engagement due to lack of information.</p> <p>State issues are more at the forefront than the Federal level. Communication is lacking. Concern about commenting on these rules as a state employee. Legally an individual can share a voice on an issue on their own time. Need a central “clearinghouse” to send out to the laboratory system stakeholders – need organization of information.</p> <p>The process used to review and comment on proposed legislation does not encourage input from laboratorians.</p> <p>No requirement for infectious disease surveillance activities. Voluntary participation of the WCLN for submitting isolates is very good.</p> <p>No formal process exists for obtaining input from laboratorians on proposed statutes and public health policy issues.</p> <p>Minimal activity</p>

INDICATOR 6.2: Encourage Compliance	
PRIORITY NEXT STEPS (rated immediate, high, medium or low)	KEY THEMES
	<p>6.2.1: QA on CLIA waived testing is needed. The availability of these tests is growing rapidly and more oversight is needed.</p> <p>State and federal agencies provide training on regulatory compliance.</p> <p>Moderate activity</p> <p>6.2.2: Clinical and environmental laboratories generally comply with all applicable laws and regulations.</p> <p>Optimal activity</p>
INDICATOR 6.3: Enforcement of Laws and Regulations----- Was not done	
PRIORITY NEXT STEPS (rated immediate, high, medium or low)	KEY THEMES

ESSENTIAL SERVICE #7: Link people to needed personal health services and assure the provision of health care when otherwise unavailable	
INDICATOR 7.1: Availability of Laboratory Services	
PRIORITY NEXT STEPS (rated immediate, high, medium or low)	KEY THEMES
<ul style="list-style-type: none"> • Develop a lab system for environmental and food testing. • Improve access to system. Good testing, good collaboration, but limited access. Need a formalized evaluation of access 	<ul style="list-style-type: none"> • WSLH promotes clinical and environmental laboratory networks in Wisconsin. • Committed commercial labs are ready to help with environmental and food safety testing • Private sector partnerships are not yet developed in environmental • Federal grants support training, planning, equipment purchases, and staffing • Clinical and environmental laboratory training is provided

<ul style="list-style-type: none"> • Identify resources to support system. Concerns about ongoing resources • Concern about well trained staff in the future • Laboratory partnerships with environmental laboratories would be useful 	<p>by WSLH</p> <ul style="list-style-type: none"> • H1N1 response demonstrated the value of partnerships to public health • Maintenance of lab capacity, sustainability, and funding will be key issues in the future • Lab capability has increased, but capacity and access is limited in some areas • Strong local public health support for labs is recognized • Department of Corrections supports testing of inmates by public health laboratories • Qualified lab staff are difficult to recruit • Support for staff development and training by public health labs is needed <p>Significant activity</p>
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ESSENTIAL SERVICE #8: Assure a competent public and personal health care workforce	
INDICATOR 8.1: Workforce Competencies	
PRIORITY NEXT STEPS (rated immediate, high, medium or low)	KEY THEMES
<ul style="list-style-type: none"> • Develop a system for assessing workforce competencies of lab staff • Limited resources to do inspections and training 	<p>8.1.1 No actions on part of public health laboratory system to set standards for personnel.</p> <ul style="list-style-type: none"> • Laboratory professionals provide consultation and technical assistance on the performance o • Environmental seems better developed. Wisconsin does not have the oversight structure. Not enough FTE and other resources to visit and train waived test sites. Larger labs have PD's competency and well trained staff. • The competency of the public and personnel health care laboratory workforce at larger laboratories is more often documented. Staff in smaller labs often do not have comparable documentation of competency • Chemical emergency response network is well developed and has established competencies for staff. • Oversight of limited chemical emergency response testing is onerous and often expensive. <p>Minimal activity</p> <p>8.1.2. There is an activity on part of the state to assess this issue. Shows that the strength is at the top. Weaker at the</p>

	<p>waived test level.</p> <ul style="list-style-type: none"> • PT is required for environmental and clinical testing. • Financial support for clinical lab training programs including continuing education of environmental and clinical lab staff is minimal • New methods of delivering training must be explored • A public health lab system needs standards for personnel and competency assessment. Standards for clinical lab testing are set at the national level. <p>Moderate</p>
INDICATOR 8.2: Staff Development	
PRIORITY NEXT STEPS (rated immediate, high, medium or low)	KEY THEMES
<ul style="list-style-type: none"> • Develop a continuing education program for all labs. • A number of non-laboratorians have transitioned to perform waived laboratory tests. 	<p>8.2.1 Staff development needs.</p> <ul style="list-style-type: none"> • Wisconsin Clinical Lab Network (WCLN) can help assess the need for staff in clinical labs. WCLN offers to provide technical skills to all levels of labs • Large labs often have more resources than smaller labs • Collaboration. There is no funding to support quality lab training in many labs. Training is less now than in past since resources are limited <p>Moderate</p> <p>8.2.2 Although training of staff performing waived testing is minimal, opportunities for lab staff training are important.</p> <p>Moderate</p>
INDICATOR 8.3: Assuring Laboratory Workforce	
PRIORITY NEXT STEPS (rated immediate, high, medium or low)	KEY THEMES
<ul style="list-style-type: none"> • Create a task force to evaluate the development of laboratory professionals. Model the program after nursing, which was able to significantly change its image and recruit students 	<p>8.3.1 No activities by the public health lab system to recruit and retain staff. There is not enough clinical and environmental lab staff being trained to replace staff that are leaving laboratory positions.</p> <ul style="list-style-type: none"> • The public sector lab workforce often goes unnoticed. The important job that the lab workforce performs may not be recognized. Future promotion of the profession would help with recruitment by raising awareness of lab

<ul style="list-style-type: none"> • Raise awareness of the profession by introducing the profession to high school students 	<p>positions.</p> <p>Minimal</p> <p>8.3.2 Added opportunities are needed to expose high school students to lab courses We do not go to the high schools to inform them of laboratory careers. We need to focus more to attract more lab candidates.</p> <p>Minimal</p>
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ESSENTIAL SERVICE #9: Evaluate effectiveness, accessibility, and quality of personal and population-based health services	
INDICATOR 9.1: System Mission and Purpose	
PRIORITY NEXT STEPS (rated immediate, high, medium or low)	KEY THEMES
<ul style="list-style-type: none"> • Strengthen the clinical and environmental component of laboratory services • Assure that lab services are accessible and of high quality 	<ul style="list-style-type: none"> • Clinical laboratories are surveyed and regional meetings are held to talk about capabilities and capacities of each lab. Laboratory Technical Advisory Group (LAB-TAG) meets regularly. • WSLH has put a focus on strategic planning over the last few years which includes evaluating progress of the plan and making changes as necessary. This plan emphasizes building lab partnerships • Local community health assessments are required every 5 years. Those assessments may or may not access the local laboratory • We know advanced technologies are in place to address population health needs. However it is rarely possible to show the impact of new advanced technology on the health of a population • Clinical labs do routinely assess what types of test methodologies are being used and evaluate results of the methodologies. However, the data gathered in those evaluations are not shared with others in the network. • The Laboratory Improvement Program at the WSLH is an avenue through which additional PT testing can be offered to help create additional oversight in problem areas. • Reduced funding may result in fewer lab tests being

	<p>performed.</p> <p>9.1.1 Moderate Activity</p> <ul style="list-style-type: none"> • People look to the public health lab system for guidance on use of rapid test methods/waived tests for infectious diseases. Many traditional labs do not rely on waived tests for infectious disease. • Public health lab system has the responsibility to educate the public on the value as well as the limitations of public health related screening tests <p>9.1.2 Moderate activity</p>
INDICATOR 9.2: System Effectiveness, Quality, and Consumer Satisfaction	
PRIORITY NEXT STEPS (rated immediate, high, medium or low)	KEY THEMES
<ul style="list-style-type: none"> • Improve communications with laboratory partners and the public • The public health lab system shares data on the results of testing provided 	<ul style="list-style-type: none"> • Clinical labs assess the types of testing and effectiveness of testing • There is a large portion of testing being done outside of the state lab system from physician offices and clinics. Usually this testing is done at large, accredited, reference labs. The quality and effectiveness of the testing performed by the reference laboratories cannot be measured by the public health system. • There are resources (i.e. committees on hospital acquired infections) within the state that are gathering data that would allow us to evaluate the effectiveness of lab testing on the public health. • Quality standards are in place for a majority of the lab services provided in the state lab system (i.e. through CAP & CLIA regulations) so we are confident that the quality of testing services we provide is high. • Voting was done by the group with the interpretation of the theme as determining the effectiveness of testing services by the entities served by the state lab system and not the population or personal health outcomes as a whole. No consensus could be reached because of the questions raised from this indicator. <p>Moderate activity</p>
INDICATOR 9.3: LPH Laboratory System Collaboration	
PRIORITY NEXT STEPS (rated immediate, high, medium or low)	KEY THEMES

<ul style="list-style-type: none"> • Inform labs and other providers of the testing available from the public health laboratory system. • Describe the role of the public health lab system 	<ul style="list-style-type: none"> • WSLH actively collaborates with other public and private clinical and environmental laboratories within Wisconsin. These collaborations lead to improved use of limited laboratory resources. • The Laboratory Technical Advisory Group (LAB-TAG) addresses weaknesses and areas for improvement, including the need for laboratory training. • There is a lot of collaborative activity but it is not a defined “system”. It was more activity that took place to respond to a given situation and that activity happened to be very effective. Once the situation was addressed, the activity stopped. If the situation arose again, would the activity take place again in the same way and with the same effectiveness? • Increased collaboration occurs when an outbreak or other event is identified that requires enhanced laboratory support such as H1N1, influenza, hexavalent chromium contamination of drinking water <p>Significant activity</p>
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ESSENTIAL SERVICE #10: Research for new insights and innovative solutions	
INDICATOR 10.1: Planning and Financing Research Activities	
PRIORITY NEXT STEPS (rated immediate, high, medium or low)	KEY THEMES
<ul style="list-style-type: none"> • Develop skills in grant writing and administration • Explore opportunities to partner with academic researchers throughout Wisconsin • Laboratories need to connect with potential partners on academic campuses or in private companies 	<p>10.1.1</p> <ul style="list-style-type: none"> • Many laboratories within the state public health laboratory system are not actively engaged in research. • WSLH maintains active research is in Newborn Screening, Cytogenetics, Molecular genetics, Communicable disease, environmental health and occupational health. • WSLH and DOH have contributed resources. We lack infrastructure- we are not great grant writers. • In environmental, we have several faculty in Engineering Department. • Agencies are limited in resources, so there is less state contribution. • Staff cuts have limited time to spend on research • Are there ways to get our input to faculty members?

<p>Funding for research is often provided by grants or other extramural funding. Laboratorians must become proficient in developing grant applications and research proposals</p>	<p>Discovery Institute is a great opportunity</p> <p>Moderate</p> <p>10.1.2</p> <ul style="list-style-type: none"> • We are deficient in mentoring junior faculty in grant writing • ICTR is a resource in campus for research. Operational grants are written. • State may have funds to support of laboratory research when such research can improve the programs. <p>Minimal</p>
<p>INDICATOR 10.2: Implementation, Evaluation, and Dissemination</p>	
<p>PRIORITY NEXT STEPS (rated immediate, high, medium or low)</p>	<p>KEY THEMES</p>
<ul style="list-style-type: none"> • Explore the development of a public health research committee to identify and direct public health laboratory research opportunities. Include state agencies, School of Public Health, and other public health laboratories 	<p>10.2.1.</p> <ul style="list-style-type: none"> • A research committee is needed to promote and support research by the public health laboratory system. • Partnerships with multiple labs are often needed to conduct public and environmental research. <p>Minimal</p> <p>10.2.2</p> <ul style="list-style-type: none"> • Coordination of research activities within the public health laboratory system may enhance the opportunities for research <p>Minimal</p> <p>10.2.3</p> <ul style="list-style-type: none"> • Successful research leads to dissemination of publications and sharing of research findings with all members of the public health laboratory system • Research is not part of many working lab activities. Research provides opportunities for enhanced professional development and recognition of laboratory staff. <p>Moderate</p>

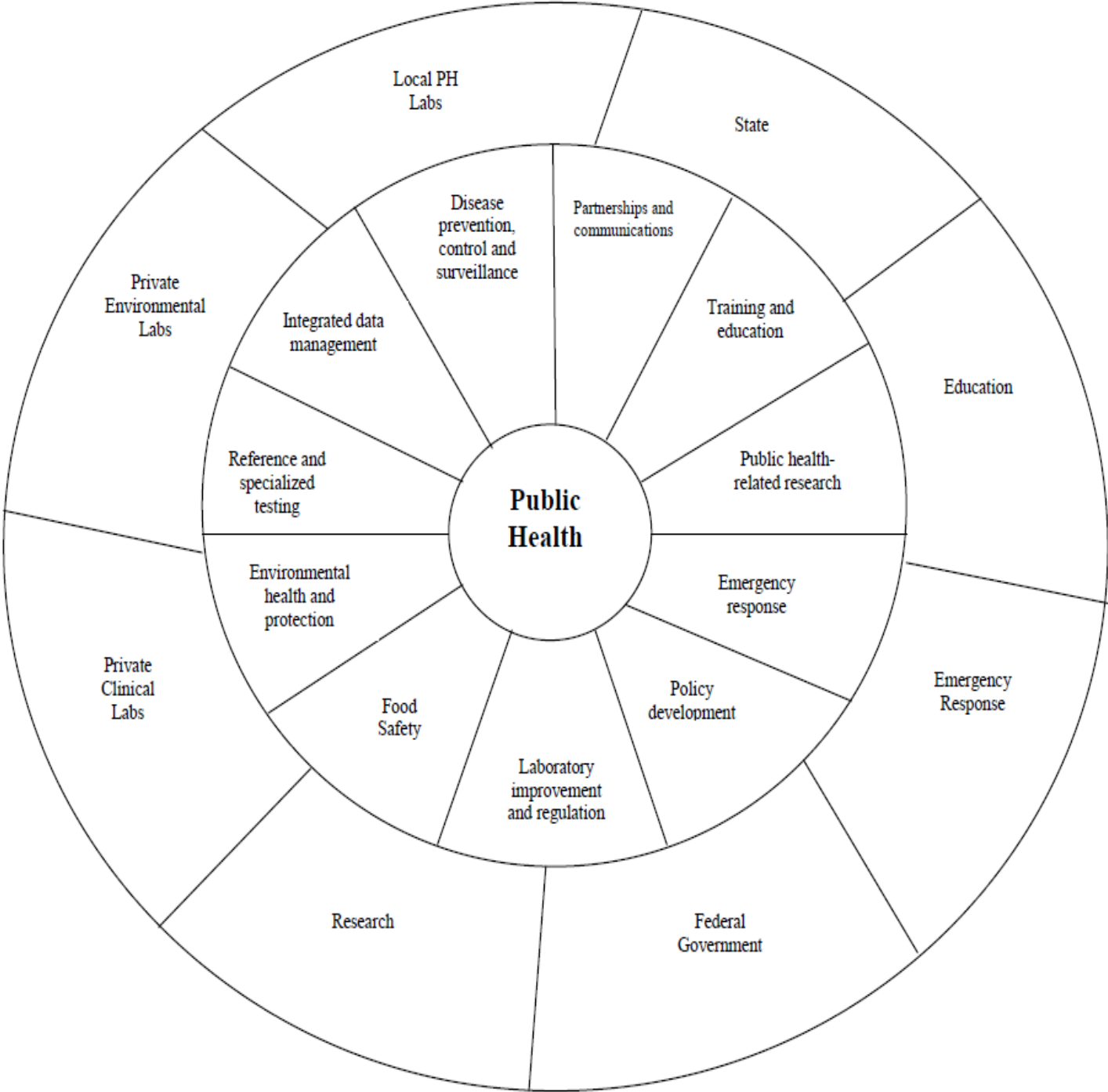
COMMON THEMES IDENTIFIED BY THE L-SIP PROCESS

COMMON THEMES	ESSENTIAL SERVICES	COMMENTS
Environmental laboratory network similar to that in infectious diseases, needs to be developed	1.1	<ul style="list-style-type: none"> Private environmental labs in surveillance Partnerships with private environmental laboratories
	1.2	<ul style="list-style-type: none"> System to support community environmental health Develop an environmental laboratory network
	2.1	<ul style="list-style-type: none"> Develop a system for reference lab testing for environmental labs
	4.1	<ul style="list-style-type: none"> Identify ways to strengthen (or build) the environmental lab network
	5.1	<ul style="list-style-type: none"> Need environmental lab data collated
	7.1	<ul style="list-style-type: none"> Fragmentation with private sector in environmental and food testing
	9.1	<ul style="list-style-type: none"> Strengthen the environmental component of the public health lab system
	Training and education of staff in the public health laboratory system	2.1
	3.3	<ul style="list-style-type: none"> While WSLH does a lot of education, there are not measurable outcomes as other have with training
	5.1	<ul style="list-style-type: none"> Investigate the possibility of having internships, volunteers, LTE's work in public health laboratories
	7.1	<ul style="list-style-type: none"> Concerned about the availability of well trained staff in the future
	8.1	<ul style="list-style-type: none"> Develop a system for training and oversight of small labs and POL's that do waived testing. Clarify the role of waived testing and education on proper use
	8.2	<ul style="list-style-type: none"> Develop a training program for smaller labs Develop a training program for other professionals (nurses) who are now doing laboratory testing
	8.3	<ul style="list-style-type: none"> Create a task force to evaluate the development of laboratory professionals. Model a program after the successful nursing awareness program. Raise awareness in grade school through high school of careers in the medical laboratory

		<ul style="list-style-type: none"> • Create competitive salaries for laboratory staff. Presently paid far less than nursing
Oversight and regulatory issues	1.2	<ul style="list-style-type: none"> • Determine the role of the state public health lab system in monitoring chronic diseases such as diabetes, cholesterol
	5.1	<ul style="list-style-type: none"> • Educate legislators and policy makers so they understand the value public health laboratories bring and how the data can be used to drive policy
	6.1	<ul style="list-style-type: none"> • Educate rather than lobby • Explore options for reviewing and recommending federal and state laws and regulations pertaining to laboratory practice • Provide a list of laws that pertain to laboratory science • Interact with key legislators • Understand the processes involved in developing policies and enactment of statutes so we can better engage in the process.
	6.2	<ul style="list-style-type: none"> • Waived testing needs greater oversight and technical assistance
	7.1	<ul style="list-style-type: none"> • Regulators are underfunded. Need better support to help POL's and waived testing
	8.1	<ul style="list-style-type: none"> • Develop a lab system for oversight of testing performed at smaller laboratories and POL's. Work with the inspection arm of DOH to develop training. Laboratory system is like a pyramid. Strong at the top and weaker in smaller labs • Clarify the role of waived tests. Establish a workgroup to establish a consultative service rather than a regulatory service
	9.2	<ul style="list-style-type: none"> • Evaluate regulating waived tests
Funding	2.1	<ul style="list-style-type: none"> • Develop contingency plans for decrease in preparedness funding
	3.1	<ul style="list-style-type: none"> • Assure funding is adequate to continue outreach and communications efforts
	4.3	<ul style="list-style-type: none"> • Since the private sector has more resources, determine how to tap into those resources
Research	10.1	<ul style="list-style-type: none"> • Develop grant writing skills • Explore opportunities to partner with UW-Madison Researchers. Easier to partner with translational researchers
	10.2	<ul style="list-style-type: none"> • Explore the development of a public health research committee to identify and direct public

		<p>health laboratory research activities. Include state agencies, School of Public Health, Population Health, and other public health laboratories</p> <ul style="list-style-type: none"> • Operational grants tend to be competitive partnerships. Competition for resources from the grant will increase as budgets get tighter • Develop WSLH research agenda that can be used to engage with the UW and others to win grants and use our data.
Communication	2.2	<ul style="list-style-type: none"> • Do a better job of communicating to SPH laboratory members so they understand the LRN and their individual roles in public health emergency preparedness and response • Investigate the alerting system to better meet the needs of all
	2.3	<ul style="list-style-type: none"> • Perform a “system assessment”. Review plans, agreements, etc. that were made years ago to see if they are still workable. • Review roles of lab partners
	4.2	<ul style="list-style-type: none"> • Communications down the system works well. Develop a system to determine the effective use of data
	5.1	<ul style="list-style-type: none"> • Expand the customer feedback process
	5.3	<ul style="list-style-type: none"> • Need for continual solicitation of feedback from customers and partners and focus on quality improvement throughout the system
	9.2	<ul style="list-style-type: none"> • Improve communication with partners • The public health lab system puts data out; evaluate how well that data is being used
Partnerships	1.1	<ul style="list-style-type: none"> • Improve partnerships with private environmental labs (WELA)
	4.1	<ul style="list-style-type: none"> • Identify resources to sustain partnerships. Work with WALHDAB, WPHA, and others. Advocate for public/private lab issues
	5.2	<ul style="list-style-type: none"> • Organize a state level association to bring laboratories of all kinds together
	9.2	<ul style="list-style-type: none"> • Work with APHL, ASCP, ASM to advocate for more oversight of waived tests
Networks	1.1	<ul style="list-style-type: none"> • Networks with smaller labs • Networks with private environmental labs
	2.1	<ul style="list-style-type: none"> • Network for reference lab testing in environmental testing • Point of care and waived testing network

Wisconsin Public Health Laboratory System Partners and Roles



Next Steps

The findings from the L-SIP process reflect the state of the public health system as seen by the participants in the process. The findings from the L-SIP process will be incorporated into the WSLH strategic planning process. Areas identified as minimal activity will be evaluated to determine what improvements can be made in addressing these goals. Some goals, such as Goal #6 relating to enforcement of laws and regulations are part of state agency responsibility and are outside the purview of the laboratory system. Next steps for the public health laboratory system improvement program are:

Establish an advisory team to evaluate the L-SIP findings. The team will consist of 8-10 external participants and 4-6 internal content experts. This team will be charged to:

- a. Review the current WSLH strategic plan and mission statement to assure that the L-SIP developed priorities fit with the established mission and vision
- b. Identify effective measures to monitor improvements which addresses essential services
- c. Prioritize the improvement areas for the Public Health Laboratory System and identify 2-3 potential actions for each essential service
- d. Identify resources needed for laboratory system improvement

Appendix #1 Agenda

Laboratory System Improvement Program Assessment (L-SIP)

Wednesday, February 16, 2011
8:00a.m. to 4:30p.m.

The Pyle Center
University of Wisconsin-Extension
702 Langdon Street
Madison, Wisconsin
(608) 262-1122

AGENDA

- 8:00a.m.** Registration
- 8:30a.m.** Welcome and Introductions
Dr. Charles Brokopp
- 8:45a.m.** Role of the Public Health Laboratory
Dr. Stanley Inhorn
- 9:00a.m.** L-SIP Process
Amy Murphy
- 9:15a.m.** Assessment Process
n **Essential Service #7**
 Linking People to Needed Personal Health Services
- 10:00a.m.** Break
- 10:15a.m.** Breakout Groups
n **Group A: Essential Service #4**
 Mobilize Community Partnerships to Identify and Solve Health Problems
n **Group B: Essential Service #6**
 Enforce Laws and Regulations that Protect Health and Ensure Safety
n **Group C: Essential Service #8**
 Assure a Competent Public Health and Personal Health Workforce
- Noon** Lunch
- 12:30p.m.** Breakout Groups
n **Group A: Essential Service #9**

Evaluate Effectiveness, Accessibility, and Quality of Personnel and Population-Based Health Services

n **Group B: Essential Service #5**

Develop policies and Plans that Support Individual and Community Health Efforts

Group C: Essential Service #1

Monitor Health Status to Identify Community Health Needs

2:00p.m. Break

2:15p.m. Breakout Groups

n **Group A: Essential Service #3**

Inform, Educate, and Empower People about Health Issues

n **Group B: Essential Service #2**

Diagnose and Investigate Health Problems and Health Hazards in the Community

n **Group C: Essential Service #10**

Evaluate Effectiveness, Accessibility, and Quality of Personnel and Population-Based Health Services

3:45p.m. Summary of Findings; Evaluation and Next Steps

4:15p.m. Questions and Feedback from Participants

4:30p.m. Adjourn

Appendix #2 Participant list

Group A	Group B	Group C
Amy Murphy-facilitator	Jan Klawitter-facilitator	Joe Goss-facilitator
Jill Northup-theme taker	Audrey Prieve-theme taker	John Shalkham-theme taker
Dave Warshauer-vote counter	Dave Webb-vote counter	Garrett Peterson-vote counter
Dr. Charles Brokopp	Sherry Gehl	Dr. Dan Kurtycz
Terry Burk	Steve Marshall	Steve Strebel
Dr. Pete Shult	Mark Allen	Ron Arneson
Dr. Sanjib Bhattacharyya	Dr. Donald Burr	John Chapin
Lt. Col. Timothy Covington	Beth Dittman	Dr. Michael Culbertson
Darryl Farmer	Judy Friederichs	Dr. Craig Foreback
James Grant	Dr. Steve Gradus	Dr. Barry Irmen
James Greer	Richard Heffernan	Robin Janzer
Dr. Stanley Inhorn	Jeffery Kindrai	Kathleen Krchnavek
Dr. Martin Kanarek	David Kliber	Julie Lindner
Lisa Pentony	Terry Moen	Dr. Thomas McKenna
Larry Reed	Mary Muse	Dr. Greg Rice
Barbara Saar	Steve Sobek	Dr. Carol Speigel
Dr. Kristi Sorsa	Doug Voegeli	Richard Dern
Jack Sullivan	Mike Cavanaugh	